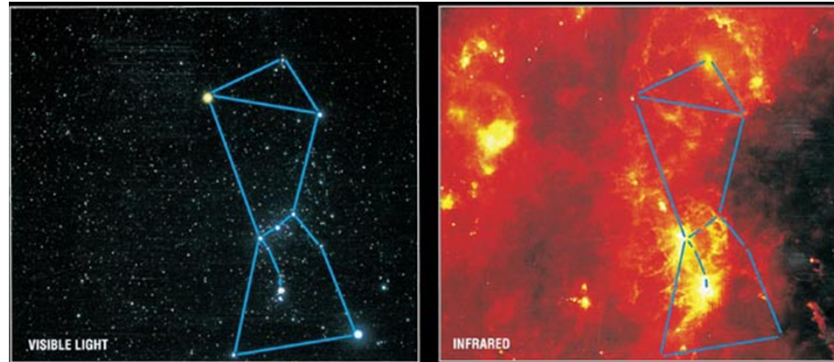


Orion Molecular Cloud



- 100 pc across
- 200,000 M_{\odot}
- Only a few of its stars close to the near edge can be seen in visible light.
 - But infrared images penetrate the dust and show many more stars.

The Orion-Monoceros Molecular Clouds

Orion A	$1.0 \times 10^5 M_{\odot}$
Orion B	0.8
Mon R2	0.9
Total complex	$4 \times 10^5 M_{\odot}$

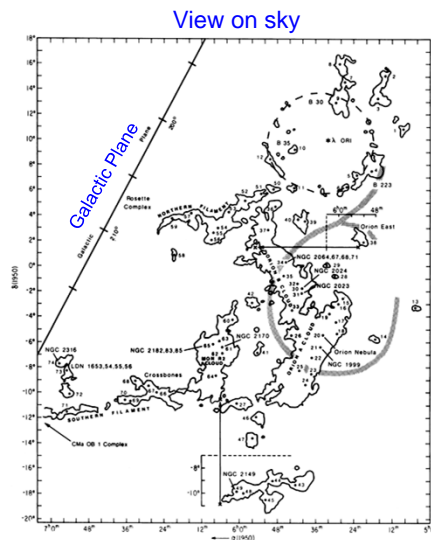
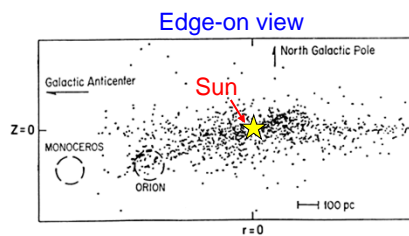
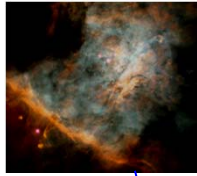


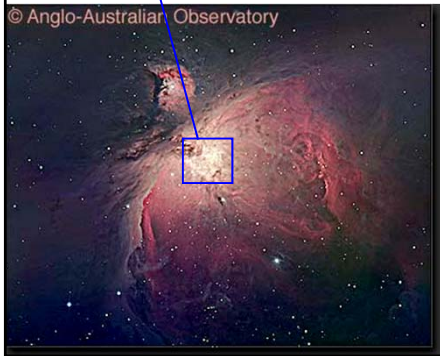
FIG. 3.—Schematic diagram of the molecular clouds: the lowest contour from Fig. 2. Dots with numbers, corresponding to those in Table 1, indicate locations of CO emission peaks. Some NGC numbers indicate the optically prominent objects coincident with CO peaks. The extent of UV emission from Barnard's loop is indicated by the shaded arc (from O'Dell, York, and Henize 1967; Isobe 1973). The dashed line roughly indicates the extent of the Orion ring of clouds.

The Orion Nebula

HII region is small cavity at edge of much bigger molecular cloud



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Earth



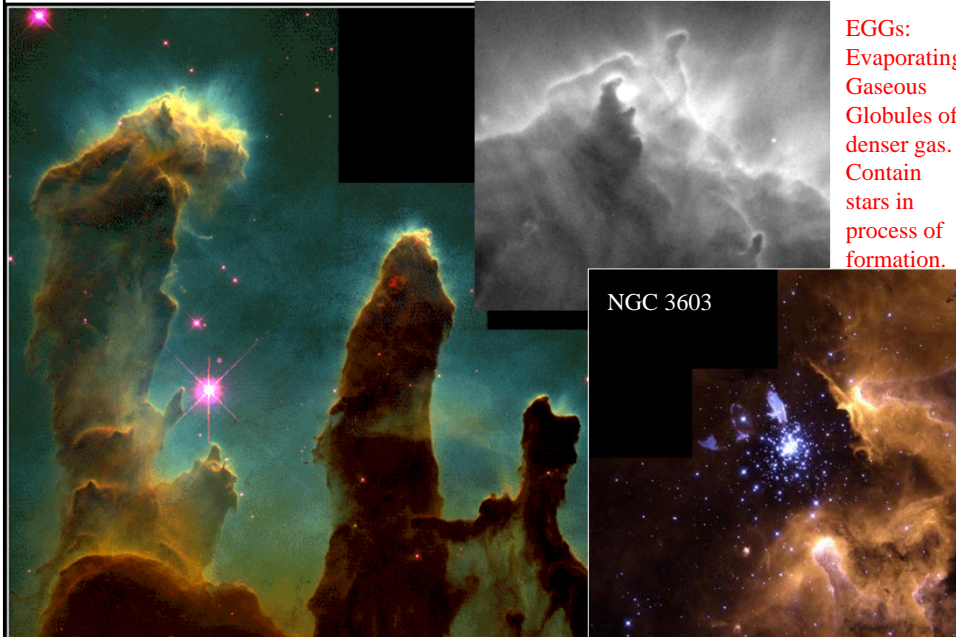
Ionized gas

Ionizing stars

Molecular cloud

- Ionized region has “blown out” of near side of dense cloud.
 - “Blister” HII Region
- Many more similar star-formation regions buried deep inside cloud.

M16 “Pillars of Creation”



EKGs:
Evaporating
Gaseous
Globules of
denser gas.
Contain
stars in
process of
formation.

NGC 3603

